

### Trend Study 2-15-01

Study site name: Lower Hodges Canyon.

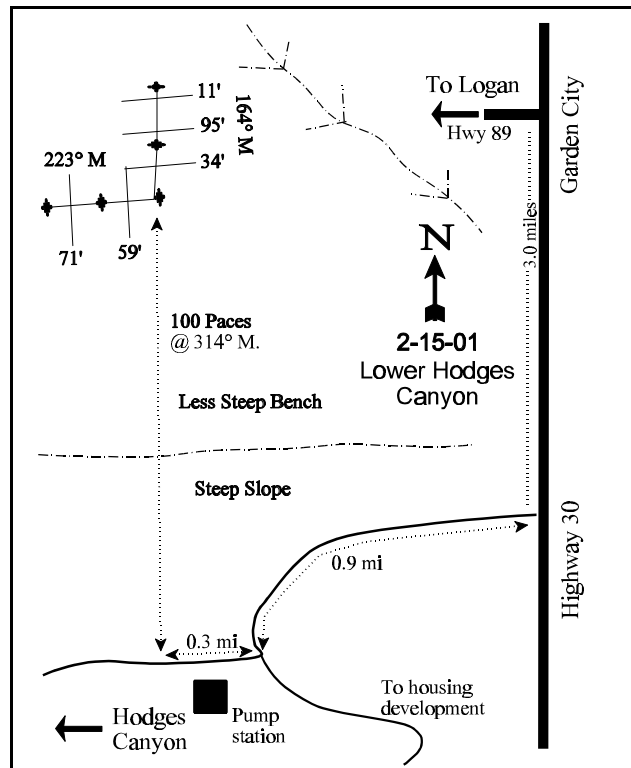
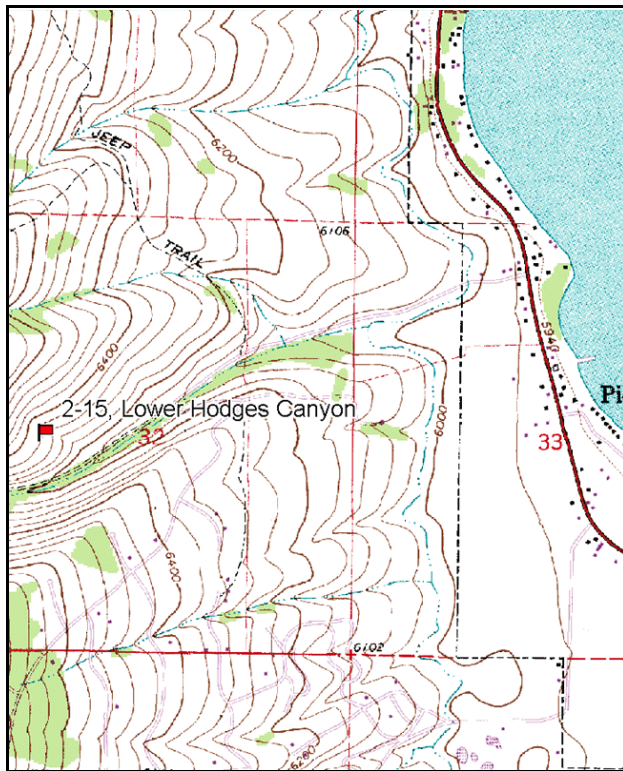
Vegetation type: Mountain Brush.

Compass bearing: frequency baseline 164 degrees magnetic.

Frequency belt placement: line 1 (11 & 95ft), line 2 (34ft), line 3 (59ft), line 4 (71ft).

### LOCATION DESCRIPTION

From the Garden City junction of U-89 and U-30 proceed south for 3.0 miles and turn right. Travel west for 0.9 miles to a point where the main road curves sharply to the left. Continue straight up Hodges Canyon from this point for 0.3 miles to a small concrete pump station on the left. At the pump station take a bearing of 314 degrees magnetic and walk up the steep slope for approximately 100 paces to the 200-foot stake of the baseline. Walk two hundred feet beyond at 344 degrees magnetic to the 0-foot stake of the baseline, marked by browse-tag #7980. The bearing of the baseline is 164 degrees magnetic. The baseline doglegs at the 200-foot baseline stake and runs 223 degrees magnetic.



Map Name: Garden City

Diagrammatic Sketch

Township 14N, Range 5E, Section 32

UTM 4639974 N, 465649 E

## DISCUSSION

### Trend Study No. 2-15

The Lower Hodges Canyon trend study is one of several studies established within the Rich County portion of management unit 2. The site is on a south-facing, 30% to 35% slope at an elevation of 6,340 feet. This location is considered within the severe winter range on this portion of the unit. The vegetative community is a mountain big sagebrush-grass type, which also contains good numbers of other shrubs. Deer pellet groups can be found in moderate numbers along with a few elk pellet groups. A pellet group transect read on site in 2001 estimated 91 deer and 6 elk days use/acre (225 ddu/ha and 15 edu/ha).

The Rich County soil survey classifies the soil at the study site within the "Yeates Hollow-Obray complex." All of the soils in this mapping unit are deep, well-drained, and derived from sedimentary rock. Although not highly permeable to water, the Yeates Hollow soil has good water holding qualities and only a moderate erosion hazard (Campbell and Lacey 1982). Soils on the site are moderately shallow and rocky throughout the profile. Due to the rocky nature of the soil, effective rooting depth (see methods) was estimated at only about 12 inches in 1996. However, deeper rooted shrubs are numerous, indicating no rooting depth restrictions within some micosites on this study area. The soil reaction is slightly acidic (pH of 6.5). Texture is a sandy clay loam. The soil surface is adequately protected from erosion due to abundant and well dispersed vegetation and litter cover.

The key browse species include mountain big sagebrush and antelope bitterbrush which accounted for 64% of the browse cover in 1996 and 57% in 2001. Mountain big sagebrush has maintained a stable population of just about 1,200 plants/acre between 1984 and 1996. However, the population continued to have a high decadency rate, ranging from 68% in 1984 to 53% in 1996. In addition, 42% of the decadent sagebrush sampled in 1996 were classified as dying. Dead plants, first sampled in 1996, were almost as numerous as live plants. Utilization was moderate to heavy in 1984 and light to moderate in 1990 and 1996. Vigor has continued to be poor on about one-third of the shrubs sampled since 1984. Reproduction is also limited with no seedlings being encountered during any of the readings. In 1990, young plants were found in good numbers (133 plants/acre) but few (40 plants/acre) were found in 1996. During the 2001 reading, the mountain big sagebrush population declined by 28%. Percent decadence is still high at 60%, and vigor is still poor on about one-third of the population. It appears that the population is still in a state of decline with 56% of the decadent shrubs classified as dying (280 plants/acre) and no seedlings and young encountered within the density strips in 2001. Utilization was light to moderate in 2001, but due to the dry conditions leader growth was low averaging 1.3 inches.

Bitterbrush displays a more stable trend since 1984. Population density has increased from 333 plants/acre estimated in 1984 to 1,320 by 2001. The population is moderate to heavily utilized, in good vigor, and percent decadence is low. Bitterbrush is becoming increasingly mature but reproduction appears adequate to maintain the population. Leader growth was quite low in 2001, averaging only 1.5 inches.

Shrubs of secondary importance include serviceberry and snowberry. Together they provided an additional 26% of the browse cover in 1996 and 34% in 2001. Serviceberry currently ('01) number only 340 plants/acre. The average mature shrub measures 2.5 feet high with a crown diameter of nearly 4 feet. Utilization has been moderate since 1996. There are no decadent plants but two-thirds of the population displayed poor vigor due to a rust infestation in 1996. Vigor was normal in 2001. Snowberry has a moderately dense population but use is mostly light.

A diverse mixture of grass species provides the bulk of the understory production and cover. Six perennial grasses are found on the site, but only bluebunch wheatgrass and Sandberg bluegrass are abundant. Annual grasses were reported to occur infrequently in 1984. By 1996, cheatgrass was abundant and provided 63% of the grass cover and 55% of the total herbaceous cover. In 2001, nested frequency of cheatgrass declined significantly and cover declined from 21% to 6%. Forbs provide comparatively little forage. However, they are still an important source of variety. Composition is fairly typical for this kind of site. Common perennial species include arrowleaf balsamroot, bastard toadflax, tapertip hawksbeard, a Penstemon, and yellow salsify.

#### 1984 APPARENT TREND ASSESSMENT

This is a good condition site which appears to have a stable soil and vegetative trend. Soil erosion is minimal and there is little evidence to suggest any significant change in vegetative composition or density is forthcoming.

#### 1990 TREND ASSESSMENT

Most all vegetative components on this site have stayed about the same or have increased on this diverse mountain brush site. Both the bitterbrush and sagebrush are generally moderately hedged and appear to have stable populations. Use is lighter on sagebrush but heavier on bitterbrush. Some of the population parameters have improved for mountain big sagebrush even though the population still displays poor vigor on about one-third of the plants sampled. Percent decadence has declined from 68% to 47%, but this is still relatively high for sagebrush. Browse trend is considered slightly up. The herbaceous understory shows good increases in quadrat and nested frequencies and remains dominated by bluebunch wheatgrass.

##### TREND ASSESSMENT

soil - stable (3)

browse - slightly up (4)

herbaceous understory - up (5)

#### 1996 TREND ASSESSMENT

Soil trend is up with increased litter cover and a decline in percent bare ground from 9% in 1990 to only 1% in 1996. Unfortunately it appears that the decline in bare ground and increase in litter cover is the result of the abundance of cheatgrass. Annual grasses and forbs were not previously included in the sampling, so no comparisons can be made. However, it was reported in 1984 that annual grasses were infrequent. Now, cheatgrass accounts for over half (55%) of the herbaceous cover and has a nested frequency value close to the maximum of 400. The browse trend appears slightly down for sagebrush but stable for bitterbrush. The sagebrush population is mostly decadent with one-third of the population in poor vigor. Reproduction is limited. Utilization has not been extremely heavy on the site so the high proportion of decadent sagebrush is likely a result of prolonged drought. The bitterbrush population is becoming increasingly mature. Utilization is moderate and vigor good. Overall, the browse trend is considered stable. Trend for the herbaceous understory is down. Sum of nested frequency for perennial grasses is down 28%, while sum of nested frequency for perennial forbs has declined 43%. Three of the five perennial grasses found on the site declined in nested frequency, 2 species declining significantly.

##### TREND ASSESSMENT

soil - up (5)

browse - stable (3)

herbaceous understory - down (1)

## 2001 TREND ASSESSMENT

Trend for soil is stable due to abundant vegetation and litter cover. There is little bare ground and the erosion condition class was classified as stable. Trend for the key browse species, mountain big sagebrush and bitterbrush, are mixed. The sagebrush population appears to be in a state of decline. Population density has declined 28%. Use is mostly light but percent decadence has increased from 53% in 1996 to 60% by 2001. In addition, 56% (280 plants/acre) of the decadent plants sampled in 2001 were classified as dying (>50% crown death). Reproduction is poor with no seedlings or young encountered. This trend appears to be driven more by climate than heavy use by wildlife. Use was moderate to heavy in 1984, but since then it has been light to moderate. Percent decadence was extremely high in 1984 at 68% and it has remained high. Leader growth for sagebrush averaged only 1.3 inches in 2001. Bitterbrush displays a stable trend. Utilization has been moderate to heavy since 1990, but vigor has remained normal and percent decadence is low. Recruitment in the form of young plants has been more than adequate to maintain the population. Leader growth is also poor averaging only 1.5 inches. Overall, the browse trend is considered down slightly due to the decline in sagebrush. Trend for the herbaceous understory is up due to a substantial increase in the sum of nested frequency of perennial grasses and forbs combined with a significant decline in cheatgrass. The dominant perennial grasses, bluebunch wheatgrass and Sandberg bluegrass, both increased significantly in nested frequency. Perennial forbs are still limited but most of the key species remained at similar frequencies or increased since 1996.

### TREND ASSESSMENT

soil - stable (3)

browse - slightly down, but stable for bitterbrush (2)

herbaceous understory - up (5)

### HERBACEOUS TRENDS --

Herd unit 02 , Study no: 15

Type	Species	Nested Frequency				Quadrat Frequency				Average Cover %	
		'84	'90	'96	'01	'84	'90	'96	'01	'96	'01
G	Agropyron spicatum	<sub>a</sub> 139	<sub>b</sub> 196	<sub>b</sub> 209	<sub>b</sub> 210	57	71	75	75	12.21	11.26
G	Bromus tectorum (a)	-	-	<sub>b</sub> 330	<sub>a</sub> 207	-	-	88	75	16.36	5.45
G	Koeleria cristata	16	11	21	19	10	7	9	10	.63	.43
G	Poa fendleriana	<sub>b</sub> 19	<sub>ab</sub> 11	<sub>a</sub> 4	<sub>a</sub> 6	11	5	2	3	.06	.18
G	Poa pratensis	<sub>b</sub> 64	<sub>b</sub> 89	<sub>a</sub> 6	<sub>a</sub> 14	28	36	4	5	.12	.48
G	Poa secunda	<sub>a</sub> 10	<sub>b</sub> 119	<sub>b</sub> 118	<sub>c</sub> 201	4	54	47	76	3.69	6.65
G	Sitanion hystrix	-	-	-	2	-	-	-	1	-	.03
Total for Annual Grasses		0	0	330	207	0	0	88	75	16.36	5.45
Total for Perennial Grasses		248	426	358	452	110	173	137	170	16.72	19.04
Total for Grasses		248	426	688	659	110	173	225	245	33.09	24.49
F	Achillea millefolium	7	4	6	7	3	2	4	4	.19	.07
F	Agoseris glauca	-	8	4	20	-	3	2	8	.01	.44
F	Alyssum alyssoides (a)	-	-	148	169	-	-	53	60	1.20	.87
F	Arabis spp.	<sub>a</sub> -	<sub>b</sub> 11	<sub>a</sub> -	<sub>a</sub> -	-	5	-	-	-	-
F	Artemisia ludoviciana	-	-	2	-	-	-	1	-	.15	-

T y p e	Species	Nested Frequency				Quadrat Frequency				Average Cover %	
		'84	'90	'96	'01	'84	'90	'96	'01	'96	'01
F	<i>Astragalus beckwithii</i>	-	-	3	5	-	-	1	2	.03	.03
F	<i>Astragalus convallarius</i>	<sub>b</sub> 18	<sub>ab</sub> 6	<sub>b</sub> 8	<sub>a</sub> -	9	2	5	-	.02	-
F	<i>Balsamorhiza sagittata</i>	<sub>ab</sub> 6	<sub>ab</sub> 4	<sub>b</sub> 8	<sub>a</sub> -	3	2	4	-	.59	.30
F	<i>Camelina microcarpa</i> (a)	-	-	3	3	-	-	1	1	.00	.00
F	<i>Calochortus nuttallii</i>	-	3	3	2	-	1	1	1	.00	.00
F	<i>Chaenactis douglasii</i>	-	1	-	-	-	1	-	-	-	-
F	<i>Cirsium undulatum</i>	4	11	4	9	2	5	3	6	.06	.25
F	<i>Collomia linearis</i> (a)	-	-	1	-	-	-	1	-	.00	-
F	<i>Comandra pallida</i>	<sub>a</sub> 22	<sub>b</sub> 40	<sub>ab</sub> 27	<sub>a</sub> 24	9	16	10	12	.22	.28
F	<i>Collinsia parviflora</i> (a)	-	-	<sub>a</sub> 18	<sub>b</sub> 62	-	-	7	27	.06	.13
F	<i>Cordylanthus ramosus</i> (a)	-	-	2	-	-	-	1	-	.03	-
F	<i>Crepis acuminata</i>	<sub>a</sub> 10	<sub>ab</sub> 90	<sub>b</sub> 49	<sub>c</sub> 99	5	39	25	44	.72	2.98
F	<i>Cymopterus</i> spp.	-	-	-	4	-	-	-	1	-	.00
F	<i>Descurainia pinnata</i> (a)	-	-	-	1	-	-	-	1	-	.01
F	<i>Draba</i> spp. (a)	-	-	-	2	-	-	-	1	-	.00
F	<i>Epilobium brachycarpum</i> (a)	-	-	<sub>b</sub> 14	<sub>a</sub> -	-	-	8	-	.04	-
F	<i>Erigeron</i> spp.	-	-	6	10	-	-	2	3	.18	.18
F	<i>Eriogonum umbellatum</i>	6	3	-	1	2	3	-	1	-	.03
F	<i>Hackelia patens</i>	-	-	9	4	-	-	4	3	.09	.04
F	<i>Holosteum umbellatum</i> (a)	-	-	-	1	-	-	-	1	-	.00
F	<i>Lactuca serriola</i>	-	-	2	4	-	-	2	2	.01	.03
F	<i>Linum lewisii</i>	-	2	3	-	-	1	2	-	.03	-
F	<i>Lomatium</i> spp.	-	-	-	3	-	-	-	1	-	.03
F	<i>Lupinus argenteus</i>	3	-	-	-	1	-	-	-	-	-
F	<i>Microsteris gracilis</i> (a)	-	-	<sub>a</sub> -	<sub>b</sub> 27	-	-	-	10	-	.05
F	<i>Penstemon humilis</i>	-	-	-	3	-	-	-	1	-	.00
F	<i>Penstemon</i> spp.	<sub>a</sub> 33	<sub>b</sub> 70	<sub>a</sub> 21	<sub>a</sub> 14	16	33	13	6	.41	.24
F	<i>Phlox longifolia</i>	<sub>a</sub> 3	<sub>c</sub> 122	<sub>a</sub> 22	<sub>b</sub> 64	1	48	12	25	.08	.52
F	<i>Senecio integerrimus</i>	-	-	-	1	-	-	-	1	-	.03
F	<i>Tragopogon dubius</i>	<sub>ab</sub> 28	<sub>a</sub> 14	<sub>b</sub> 43	<sub>b</sub> 43	16	6	17	20	.49	.49
F	Unknown forb-perennial	3	2	-	-	1	2	-	-	-	-
Total for Annual Forbs		0	0	186	265	0	0	71	101	1.33	1.07
Total for Perennial Forbs		143	391	220	317	68	169	108	141	3.34	5.99
Total for Forbs		143	391	406	582	68	169	179	242	4.68	7.07

Values with different subscript letters are significantly different at alpha = 0.10 (annuals excluded)

## BROWSE TRENDS --

Herd unit 02 , Study no: 15

Type	Species	Strip Frequency		Average Cover %	
		'96	'01	'96	'01
B	Amelanchier alnifolia	16	15	1.43	1.27
B	Artemisia tridentata vaseyana	44	36	7.25	8.51
B	Chrysothamnus viscidiflorus viscidiflorus	13	13	.65	1.37
B	Eriogonum heracleoides	6	7	1.41	.33
B	Eriogonum microthecum	21	21	.78	1.57
B	Pediocactus simpsonii	0	1	-	-
B	Purshia tridentata	55	55	11.32	11.55
B	Symphoricarpos oreophilus	49	48	6.24	10.67
B	Tetradymia canescens	2	3	.03	.03
Total for Browse		206	199	29.13	35.32

## BASIC COVER --

Herd unit 02 , Study no: 15

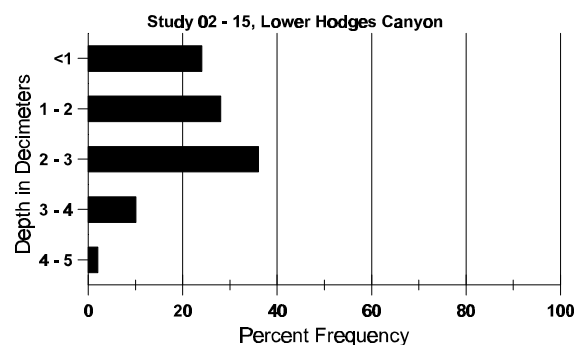
Cover Type	Nested Frequency		Average Cover %			
	'96	'01	'84	'90	'96	'01
Vegetation	394	363	1.00	12.25	66.81	60.50
Rock	86	76	2.25	3.75	1.15	1.22
Pavement	80	143	1.25	1.75	.69	1.45
Litter	400	395	86.75	72.75	77.68	58.52
Cryptogams	57	52	.25	.50	.49	1.03
Bare Ground	87	111	8.50	9.00	1.20	2.56

## SOIL ANALYSIS DATA --

Herd Unit 02, Study no: 15, Lower Hodges Canyon

Effective rooting depth (in)	Temp °F (depth)	PH	%sand	%silt	%clay	%0M	PPM P	PPM K	dS/m
11.7	53.8 (12.0)	6.5	49.3	25.7	25.0	2.7	23.1	198.4	.4

## Stoniness Index



PELLET GROUP FREQUENCY --

Herd unit 02 , Study no: 15

Type	Quadrat Frequency		Pellet Transect	
	'96	'01	Pellet Groups per Acre	Days Use per Acre (ha)
			'01	'01
Coyote	-	1	-	-
Rabbit	1	2	-	-
Elk	3	9	78	6 (15)
Deer	19	34	1183	91 (225)

BROWSE CHARACTERISTICS --

Herd unit 02 , Study no: 15

A Y G R E	Form Class (No. of Plants)	Vigor Class										Plants Per Acre	Average (inches) Ht. Cr.	Total			
		1	2	3	4	5	6	7	8	9	1				2	3	4
Amelanchier alnifolia																	
S	84	-	-	-	-	-	-	-	-	-	-	-	-	-	0		0
	90	-	-	-	-	-	-	-	-	-	-	-	-	-	0		0
	96	1	-	-	-	-	-	-	-	-	-	1	-	-	20		1
	01	-	-	-	-	-	-	-	-	-	-	-	-	-	0		0
Y	84	-	-	-	-	-	-	-	-	-	-	-	-	-	0		0
	90	1	-	-	3	-	-	1	-	-	5	-	-	-	333		5
	96	1	3	-	6	-	-	-	-	-	1	2	6	1	200		10
	01	2	1	-	1	-	-	-	-	-	4	-	-	-	80		4
M	84	-	-	-	-	-	-	-	-	-	-	-	-	-	0	-	0
	90	-	-	-	2	1	-	-	-	-	3	-	-	-	200	37	33
	96	-	10	3	-	-	-	-	-	-	2	1	9	1	260	26	46
	01	3	7	-	-	2	1	-	-	-	13	-	-	-	260	30	43
X	84	-	-	-	-	-	-	-	-	-	-	-	-	-	0		0
	90	-	-	-	-	-	-	-	-	-	-	-	-	-	0		0
	96	-	-	-	-	-	-	-	-	-	-	-	-	-	40		2
	01	-	-	-	-	-	-	-	-	-	-	-	-	-	20		1
% Plants Showing		<u>Moderate Use</u>			<u>Heavy Use</u>			<u>Poor Vigor</u>			<u>%Change</u>						
'84		00%			00%			00%									
'90		13%			00%			00%			-14%						
'96		57%			13%			74%			-26%						
'01		59%			06%			00%									
Total Plants/Acre (excluding Dead & Seedlings)												'84	0	Dec:	-		
												'90	533		-		
												'96	460		-		
												'01	340		-		

A G E	Y R	Form Class (No. of Plants)									Vigor Class				Plants Per Acre	Average (inches)		Total
		1	2	3	4	5	6	7	8	9	1	2	3	4		Ht.	Cr.	
Artemisia tridentata vaseyana																		
Y	84	-	-	-	-	-	-	-	-	-	-	-	-	-	0		0	
	90	1	-	-	1	-	-	-	-	-	2	-	-	-	133		2	
	96	2	-	-	-	-	-	-	-	-	2	-	-	-	40		2	
	01	-	-	-	-	-	-	-	-	-	-	-	-	-	0		0	
M	84	-	4	2	-	-	-	-	-	-	5	-	-	1	400	34	46	
	90	4	2	-	1	-	-	-	-	-	7	-	-	-	466	36	53	
	96	13	8	2	1	1	-	-	-	-	21	-	4	-	500	30	39	
	01	13	2	1	-	-	-	1	-	-	17	-	-	-	340	30	45	
D	84	1	8	4	-	-	-	-	-	-	8	-	5	-	866		13	
	90	4	3	-	1	-	-	-	-	-	2	1	1	4	533		8	
	96	11	12	4	4	-	-	-	-	-	16	-	2	13	620		31	
	01	17	6	2	-	-	-	-	-	-	11	-	-	14	500		25	
X	84	-	-	-	-	-	-	-	-	-	-	-	-	-	0		0	
	90	-	-	-	-	-	-	-	-	-	-	-	-	-	0		0	
	96	-	-	-	-	-	-	-	-	-	-	-	-	-	940		47	
	01	-	-	-	-	-	-	-	-	-	-	-	-	-	780		39	
% Plants Showing		<u>Moderate Use</u>			<u>Heavy Use</u>			<u>Poor Vigor</u>			<u>%Change</u>							
'84		63%			32%			32%			-11%							
'90		29%			00%			29%			+ 2%							
'96		36%			10%			33%			-28%							
'01		19%			07%			33%										
Total Plants/Acre (excluding Dead & Seedlings)												'84	1266	Dec:	68%			
												'90	1132		47%			
												'96	1160		53%			
												'01	840		60%			
Chrysothamnus viscidiflorus viscidiflorus																		
M	84	2	-	-	-	-	-	-	-	-	2	-	-	-	133	19	30	
	90	1	-	-	1	-	-	-	-	-	2	-	-	-	133	28	33	
	96	16	-	-	-	-	-	-	-	-	16	-	-	-	320	20	32	
	01	11	-	-	-	-	-	-	-	-	11	-	-	-	220	18	31	
D	84	-	-	-	-	-	-	-	-	-	-	-	-	-	0		0	
	90	-	-	-	-	-	-	-	-	-	-	-	-	-	0		0	
	96	1	-	-	-	-	-	-	-	-	1	-	-	-	20		1	
	01	2	-	-	1	-	-	-	-	-	2	-	-	1	60		3	
% Plants Showing		<u>Moderate Use</u>			<u>Heavy Use</u>			<u>Poor Vigor</u>			<u>%Change</u>							
'84		00%			00%			00%			+ 0%							
'90		00%			00%			00%			+61%							
'96		00%			00%			00%			-18%							
'01		00%			00%			07%										
Total Plants/Acre (excluding Dead & Seedlings)												'84	133	Dec:	0%			
												'90	133		0%			
												'96	340		6%			
												'01	280		21%			



A G E	Y R	Form Class (No. of Plants)									Vigor Class				Plants Per Acre	Average (inches)		Total
		1	2	3	4	5	6	7	8	9	1	2	3	4		Ht.	Cr.	
Eriogonum heracleoides																		
M	84	-	-	-	-	-	-	-	-	-	-	-	-	-	0	-	-	0
	90	-	-	-	-	-	-	-	-	-	-	-	-	-	0	-	-	0
	96	11	-	-	-	-	-	-	-	-	11	-	-	-	220	9	15	11
	01	5	2	-	2	-	-	1	-	-	10	-	-	-	200	7	16	10
% Plants Showing		<u>Moderate Use</u>			<u>Heavy Use</u>			<u>Poor Vigor</u>			<u>%Change</u>							
'84		00%			00%			00%										
'90		00%			00%			00%										
'96		00%			00%			00%			- 9%							
'01		20%			00%			00%										
Total Plants/Acre (excluding Dead & Seedlings)												'84		0	Dec:		-	
												'90		0			-	
												'96		220			-	
												'01		200			-	
Eriogonum microthecum																		
M	84	-	-	-	-	-	-	-	-	-	-	-	-	-	0	-	-	0
	90	-	-	-	-	-	-	-	-	-	-	-	-	-	0	-	-	0
	96	28	-	-	6	-	-	-	-	-	34	-	-	-	680	14	22	34
	01	24	-	-	2	-	-	2	-	-	27	1	-	-	560	13	19	28
% Plants Showing		<u>Moderate Use</u>			<u>Heavy Use</u>			<u>Poor Vigor</u>			<u>%Change</u>							
'84		00%			00%			00%										
'90		00%			00%			00%										
'96		00%			00%			00%			-18%							
'01		00%			00%			00%										
Total Plants/Acre (excluding Dead & Seedlings)												'84		0	Dec:		-	
												'90		0			-	
												'96		680			-	
												'01		560			-	
Pediocactus simpsonii																		
M	84	-	-	-	-	-	-	-	-	-	-	-	-	-	0	-	-	0
	90	-	-	-	-	-	-	-	-	-	-	-	-	-	0	-	-	0
	96	-	-	-	-	-	-	-	-	-	-	-	-	-	0	-	-	0
	01	-	-	1	-	-	-	-	-	-	1	-	-	-	20	-	-	1
% Plants Showing		<u>Moderate Use</u>			<u>Heavy Use</u>			<u>Poor Vigor</u>			<u>%Change</u>							
'84		00%			00%			00%										
'90		00%			00%			00%										
'96		00%			00%			00%										
'01		00%			100%			00%										
Total Plants/Acre (excluding Dead & Seedlings)												'84		0	Dec:		-	
												'90		0			-	
												'96		0			-	
												'01		20			-	

A G E	Y R	Form Class (No. of Plants)									Vigor Class				Plants Per Acre	Average (inches) Ht. Cr.		Total
		1	2	3	4	5	6	7	8	9	1	2	3	4				
Purshia tridentata																		
S	84	-	-	-	-	-	-	-	-	-	-	-	-	0			0	
	90	-	-	-	-	-	-	-	-	-	-	-	-	0			0	
	96	1	-	-	-	-	-	-	-	-	1	-	-	20			1	
	01	-	-	-	-	-	-	-	-	-	-	-	-	0			0	
Y	84	2	-	-	-	-	-	-	-	-	2	-	-	133			2	
	90	-	2	-	-	-	-	-	-	-	2	-	-	133			2	
	96	2	-	-	2	-	-	-	-	-	4	-	-	80			4	
	01	1	-	-	2	-	-	-	-	-	3	-	-	60			3	
M	84	3	-	-	-	-	-	-	-	-	3	-	-	200	15	27	3	
	90	-	2	2	2	2	1	-	-	-	8	-	1	600	18	32	9	
	96	16	38	8	9	2	-	-	-	-	73	-	-	1460	22	41	73	
	01	5	27	20	-	2	3	-	-	-	56	-	1	1140	22	52	57	
D	84	-	-	-	-	-	-	-	-	-	-	-	-	0			0	
	90	-	1	-	5	-	-	-	-	-	6	-	-	400			6	
	96	-	1	1	-	-	-	-	-	-	1	-	-	40			2	
	01	1	2	1	-	2	-	-	-	-	6	-	-	120			6	
X	84	-	-	-	-	-	-	-	-	-	-	-	-	0			0	
	90	-	-	-	-	-	-	-	-	-	-	-	-	0			0	
	96	-	-	-	-	-	-	-	-	-	-	-	-	100			5	
	01	-	-	-	-	-	-	-	-	-	-	-	-	40			2	
% Plants Showing		<u>Moderate Use</u>			<u>Heavy Use</u>			<u>Poor Vigor</u>			<u>%Change</u>							
'84		00%			00%			00%			+71%							
'90		41%			18%			06%			+28%							
'96		52%			11%			01%			-16%							
'01		50%			36%			02%										
Total Plants/Acre (excluding Dead & Seedlings)												'84	333	Dec:	0%			
												'90	1133		35%			
												'96	1580		3%			
												'01	1320		9%			

A G E	Y R	Form Class (No. of Plants)									Vigor Class				Plants Per Acre	Average (inches) Ht. Cr.		Total
		1	2	3	4	5	6	7	8	9	1	2	3	4				
Symphoricarpos oreophilus																		
S	84	-	-	-	-	-	-	-	-	-	-	-	-	-	0		0	
	90	-	-	-	-	-	-	-	-	-	-	-	-	-	0		0	
	96	5	-	-	2	-	-	-	-	-	7	-	-	-	140		7	
	01	-	-	-	-	-	-	-	-	-	-	-	-	-	0		0	
Y	84	8	-	-	-	-	-	-	-	-	8	-	-	-	533		8	
	90	6	-	-	2	-	-	1	-	-	6	1	2	-	600		9	
	96	2	-	-	7	-	-	-	-	-	9	-	-	-	180		9	
	01	-	-	-	-	-	-	-	-	-	-	-	-	-	0		0	
M	84	9	-	-	-	-	-	-	-	-	9	-	-	-	600	29	44	9
	90	43	15	-	4	-	-	-	-	-	59	1	2	-	4133	25	35	62
	96	42	4	-	28	-	-	-	-	-	67	-	7	-	1480	24	41	74
	01	44	-	-	7	-	-	2	-	-	44	-	9	-	1060	26	46	53
D	84	-	-	-	-	-	-	-	-	-	-	-	-	-	0		0	
	90	4	-	-	-	-	-	-	-	-	4	-	-	-	266		4	
	96	-	-	-	-	-	-	-	-	-	-	-	-	-	0		0	
	01	10	-	-	-	-	-	-	-	-	7	-	2	1	200		10	
X	84	-	-	-	-	-	-	-	-	-	-	-	-	-	0		0	
	90	-	-	-	-	-	-	-	-	-	-	-	-	-	0		0	
	96	-	-	-	-	-	-	-	-	-	-	-	-	-	60		3	
	01	-	-	-	-	-	-	-	-	-	-	-	-	-	0		0	
% Plants Showing		<u>Moderate Use</u>			<u>Heavy Use</u>			<u>Poor Vigor</u>			<u>%Change</u>							
'84		00%			00%			00%			+77%							
'90		20%			00%			05%			-67%							
'96		05%			00%			08%			-24%							
'01		00%			00%			19%										
Total Plants/Acre (excluding Dead & Seedlings)												'84	1133	Dec:	0%			
												'90	4999		5%			
												'96	1660		0%			
												'01	1260		16%			

A G E	Y R	Form Class (No. of Plants)									Vigor Class				Plants Per Acre	Average (inches) Ht. Cr.		Total
		1	2	3	4	5	6	7	8	9	1	2	3	4				
Tetradymia canescens																		
M	84	-	-	-	-	-	-	-	-	-	-	-	-	-	0	-	-	0
	90	-	-	-	-	-	-	-	-	-	-	-	-	-	0	-	-	0
	96	3	-	-	-	-	-	-	-	-	3	-	-	-	60	19	30	3
	01	2	-	-	-	-	-	-	-	-	2	-	-	-	40	16	22	2
D	84	-	-	-	-	-	-	-	-	-	-	-	-	-	0			0
	90	-	-	-	-	-	-	-	-	-	-	-	-	-	0			0
	96	-	-	-	-	-	-	-	-	-	-	-	-	-	0			0
	01	1	-	-	-	-	-	-	-	-	1	-	-	-	20			1
% Plants Showing		<u>Moderate Use</u>			<u>Heavy Use</u>			<u>Poor Vigor</u>			<u>%Change</u>							
'84		00%			00%			00%										
'90		00%			00%			00%										
'96		00%			00%			00%			+ 0%							
'01		00%			00%			00%										
Total Plants/Acre (excluding Dead & Seedlings)												'84	0	Dec:	0%			
												'90	0		0%			
												'96	60		0%			
												'01	60		33%			